

DOCKET NO.: FCI-2701/4524B (C7123B)
Application No.: 09/886,550
Office Action Dated: June 11, 2003

PATENT

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-64 (Canceled).

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65. (New) A housing for an electrical connector, said housing comprising:
an insulative body comprising:
- a) a mating surface including an opening therein;
 - b) a second surface positioned generally perpendicular to said mating surface;
 - c) a contact receiving cavity extending from said opening in said mating surface and along at least a portion of said second surface; and
 - d) a heat dissipation opening formed in said second surface of said insulative body, said heat dissipation opening being fluidly connected to said contact receiving cavity.
66. (New) The housing as claimed in claim 65, wherein said heat dissipation opening is positioned to receive heat, through convection, from within said contact receiving cavity.
67. (New) The housing as claimed in claim 65, further comprising an electrically conductive contact positioned in said contact receiving cavity, said electrically conductive contact comprising two spaced apart contact walls.
68. (New) The housing as claimed in claim 67, wherein at least one of said two spaced apart contact walls is spaced away from adjacent housing structure bounding said contact

receiving cavity such that a heat dissipation channel is formed between said at least one of said two spaced apart contact walls and said adjacent housing structure.

69. (New) The housing as claimed in claim 68, wherein said heat dissipation channel is fluidly connected to said heat dissipation opening.

70. (New) The housing as claimed in claim 68, wherein said at least one of said two spaced apart contact walls includes a lateral positioning element for spacing away from said adjacent housing structure.

71. (New) The housing as claimed in claim 68, wherein said adjacent housing structure includes a lateral positioning element for spacing said at least one of said two spaced apart contact walls from said adjacent housing structure.

72. (New) An electrical connector for power applications, the connector comprising:

a) an insulative housing that defines a mating surface, a planar surface positioned perpendicular to said mating surface, and a contact receiving cavity, said contact receiving cavity defining an opening at said mating surface;

b) a plug contact disposed in said contact receiving cavity, said plug contact comprising:

i) a pair of opposed contact side walls defined by a first panel, a second panel, and a medial space between the first panel and the second panel;

ii) a first flexible beam that extends from said first panel and past said mating surface; and

iii) a second flexible beam that extends from said second panel and past said mating surface;

wherein a convective heat flow path is defined between said first flexible beam and said second flexible beam, said convective heat flow path extending along an imaginary heat flow axis oriented generally parallel to said mating surface and generally perpendicular to said planar surface; and

d) a heat dissipation opening defined by said planar surface of said insulative housing, said heat dissipation opening being fluidly connected to said contact receiving cavity.

73. (New) A housing for an electrical connector, said housing comprising:

a) a first wall that defines a heat dissipation opening;

b) a second wall that defines a mating surface and an opening fluidly connected to said first wall; and

c) vertical partitions extending from said first wall to form a power contact retaining slot, said power contact retaining slot being fluidly connected to said heat dissipation opening.

74. (New) An electrical connector for power applications, the connector comprising:

a) an insulative housing;

b) a plurality of cavities disposed in said insulative housing defined by a series of housing walls; and

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c) a power contact disposed in each of said plurality of cavities, said power contact comprising a pair of opposed contact walls defined by a first planar panel, a second planar panel, and a medial space between the first planar panel and the second planar panel;

wherein heat dissipation can occur from interior contact surfaces by passage of air in the medial space; and

wherein a substantial portion of at least one of the first planar panel and the second planar panel is spaced from an adjacent housing wall such that heat dissipation can also occur from an exterior contact surface.